LibreNMS Administration

Performance Tuning

- After LibreNMS installation it's recommended to optimizes the performance. In large scale monitoring environment, it provides fast and robust solution for entire IT.

RRDCached

- It reduces the IO load of monitoring server:

RRDCached installation CentOS 8

1: Create `/etc/systemd/system/rrdcached.service` with this content:

```
# vi /etc/systemd/system/rrdcached.service
```

```
[Unit]
Description=Data caching daemon for rrdtool
After=network.service

[Service]
Type=forking
PIDFile=/run/rrdcached.pid
ExecStart=/usr/bin/rrdcached -w 1800 -z 1800 -f 3600 -s librenms -U librenms -G
  librenms -B -R -j /var/tmp -l unix:/run/rrdcached.sock -t 4 -F -b /opt/librenms/rrd/

[Install]
WantedBy=default.target
```

2: Start rrdcached

```
systemctl enable --now rrdcached.service
```

3: Edit `/opt/librenms/config.php` to include:

```
$config['rrdcached'] = "unix:/run/rrdcached.sock";
```

Verify:

Check to see if the graphs are being drawn in LibreNMS. This might take a few minutes. After at least one poll cycle (5 mins), check the LibreNMS disk I/O performance delta. Disk I/O can be found under the menu Devices>All Devices>localhost>Health>Disk I/O.

Depending on many factors, you should see the Ops/sec drop by ~30-40%.
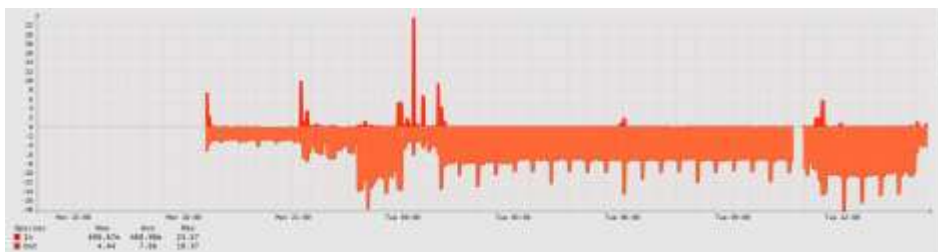
Network-WeatherMap with LibreNMS

Integrating LibreNMS with Network-Weathermap, allows you to build network maps to help visualize network traffic flow rates.

Prerequisites

Network-WeatherMap requires php pear to work:

```
# dnf install php-pear
```

Installing Network-WeatherMap

Step-1: Extract to your LibreNMS plugins directory /opt/librenms/html/plugins so you should see something like /opt/librenms/html/plugins/Weathermap/

The best way to do this is via git. Go to your install directory and then /opt/librenms/html/plugins

```
# cd /opt/librenms/html/plugins
# git clone https://github.com/librenms-plugins/Weathermap.git
```

**Step-2:** Inside the html/plugins directory, change the ownership and permission of the Weathermap directory:

```
# chown -R librenms:librenms Weathermap/
# chmod 775 /opt/librenms/html/plugins/Weathermap/configs
```

Step-3: Enable the cron process by editing your current LibreNMS cron file (typically /etc/cron.d/librenms) and add the following:

```
# vi /etc/cron.d/librenms

*/5 * * * * librenms /usr/bin/php /opt/librenms/html/plugins/Weathermap/map-poller.php >> /dev/null 2>&1
```

Step-4: Enable the plugin from LibreNMS Web UI in OverView ->Plugins -> Plugin Admin menu.
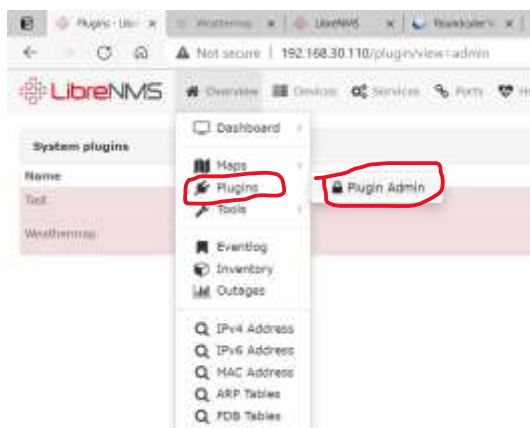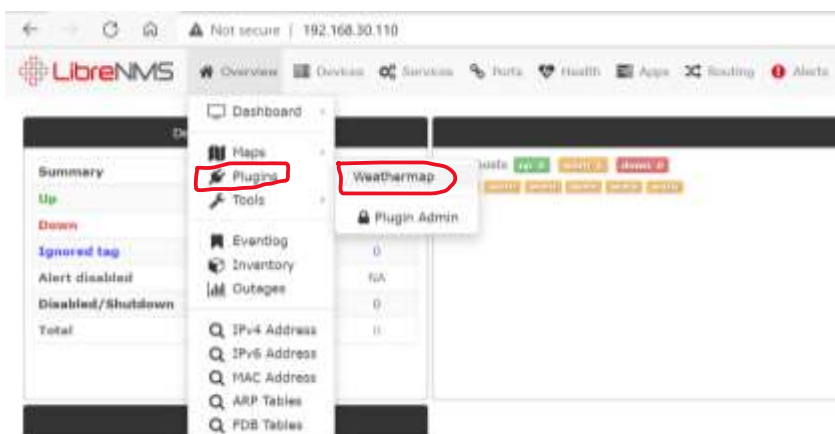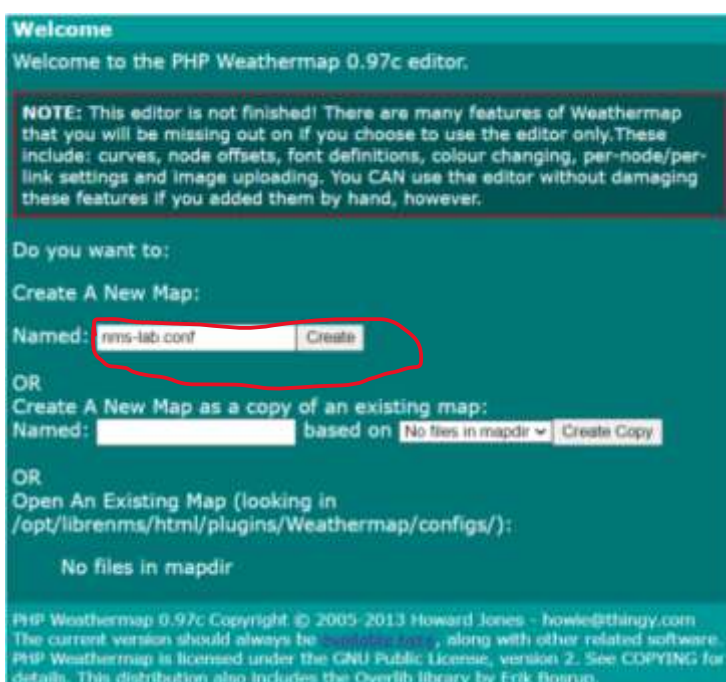
Step-5: Now you should see Weathermap Overview -> Plugins -> Weathermap

Create your maps, please note when you create a MAP, please click Map Style, ensure Overlib is selected for HTML Style and click submit.

Also, ensure you set an output image filename and output HTML filename in Map Properties. I'd recommend you use the output folder as this is excluded from git updates (i.e enter output/mymap.png and output/mymap.html).

Click here to access the editor where you can create and manage maps.

Welcome

Welcome to the PHP Weathermap 0.97c editor.

NOTE: This editor is not finished! There are many features of Weathermap that you will be missing out on if you choose to use the editor only. These include: curves, node offsets, font definitions, colour changing, per-node/per-link settings and image uploading. You CAN use the editor without damaging these features if you added them by hand, however.

Do you want to:

Create A New Map:

Named: nms-lab.conf   [Create]

OR
Create A New Map as a copy of an existing map:
Named: [   ]   based on [No files in mapdir ∨] [Create Copy]

OR
Open An Existing Map (looking in /opt/librenms/html/plugins/Weathermap/configs/):

No files in mapdir

PHP Weathermap 0.97c Copyright © 2005-2013 Howard Jones - howie@thingy.com
The current version should always be available here, along with other related software.
PHP Weathermap is licensed under the GNU Public License, version 2. See COPYING for details. This distribution also includes the Overlib library by Erik Bosrup.

	Add Node	Add Link	Position Legend	Position Timestamp	Map Properties	Map Style	Manage Colors	Manage Images	Editor Settings	Position ---, ---	or click a Node or Link to edit it's properties
Return to Cacti											

Created: Nov 28 2020 19:06:29

4

Debug: Re-tidy ALL Re-tidy Un-tidy Do Nothing

	mapfile	action	param	param2	debug	
	nms-lab.conf				existing	See config

Created: Nov 28 2020 19:10:04

Node Properties

Cancel Submit

Position	143	240
Internal Name	CISCO-R2	
Label	CISCO-R2	
Info URL		
'Hover' Graph URL		(Pick from Cacti)
Icon Filename	images/Router.png	

Move Delete Clone Edit

This is where help appears for nodes

Created: Nov 28 2020 19:11:08

NMS-Server

CISCO-R2

SW-1

CISCO-R2

Cancel Submit

Created: Nov 28 2020 19:11:47

NMS-Server

CISCO-R2 [0.00%] ► ◄ [0.00%] SW-1

CISCO-R2

			mapfile	action	param	param2	debug	
Debug: Re-tidy ALL Re-tidy Un-tidy Do Nothing	nms-lab.conf				SW-1-CISCO-R2		existing	See config

Created: Nov 28 2020 19:11:47

Link Properties

Link from 'SW-1' to 'CISCO-R2'

Cancel Submit

Maximum Bandwidth Into 'SW-1'	100M	bits/sec
Maximum Bandwidth Out of 'SW-1'	✓ Same As 'In' or	bits/sec
Data Source		Pick from Cacti
Link Width	4	pixels
Info URL		
'Hover' Graph URL		
IN Comment		95% ▾
OUT Comment		5% ▾

Delete Link Edit Tidy Via

How wide the link arrow will be drawn, in pixels.

CISCO-R2

			mapfile	action	param	param2	debug	
Debug: Re-tidy ALL Re-tidy Un-tidy Do Nothing	nms-lab.conf		set_link_properties		SW-1-CISCO-R2		existing	See config

Created: Nov 28 2020 19:11:47

Link Properties

Link from 'SW-1' to 'CISCO-R2'

Cancel Submit

Maximum Bandwidth Into 'SW-1'	100M	bits/sec
Maximum Bandwidth Out of 'SW-1'	☑ Same As 'In' or [ ]	bits/sec
Data Source	[ ]	Pick from Cacti
Link Width	4	pixels
Info URL	[ ]	
'Hover' Graph URL	[ ]	
IN Comment	[ ]	95% ▾
OUT Comment	[ ]	5% ▾

Delete Link   Edit   Tidy   Via

How wide the link arrow will be drawn, in pixels.

CISCO-R2

	mapfile	action	param	param2	debug	
Debug: Re-tidy ALL Re-tidy Un-tidy Do Nothing	nms-lab.conf	set_link_properties	SW-1-CISCO-R2		existing	See config

Created: Nov 28 2020 19:24:58

Traffic Load
- 0-1%
- 1-10%
- 10-25%
- 25-40%
- 40-55%
- 55-70%
- 70-85%
- 85-100%

Map Style

Link Labels	Bits/sec ∨
HTML Style	Static HTML ∨
Arrow Style	Classic ∨
Node Font	3 (GD builtin) ∨
Link Label Font	2 (GD builtin) ∨
Legend Font	4 (GD builtin) ∨

Cancel Submit

Font Samples:

Abc123% Abc123% **Abc123%** Abc123% **Abc123%**

Font 1 Font 2 Font 3   Font 4   Font 5

(Drawn using your PHP install)

Helpful text will appear here, depending on the current item selected. It should wrap onto several lines, if it's necessary for it to do that.

Change File	Add Node	Add Link	Position Legend	Position Timestamp	Map Properties	Map Style	Manage Colors	Manage Images	Editor Settings	Position --,--

Map Properties

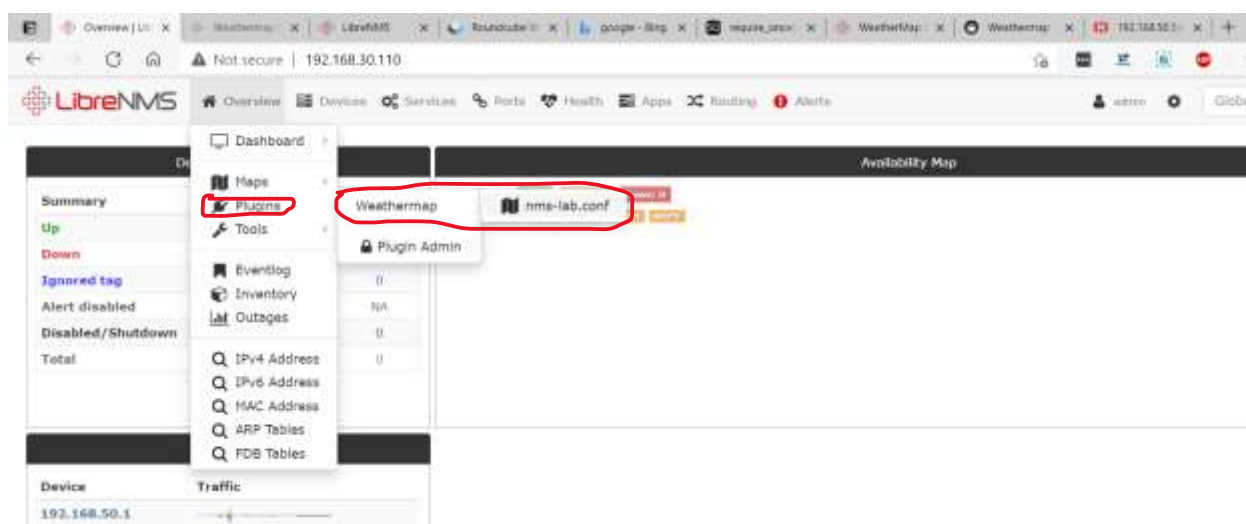|	
Map Title	Network Weathermap
Legend Text	Traffic Load
Timestamp Text	Created: %b %d %Y %H:%M:%
Default Link Width	4 pixels
Default Link Bandwidth	100M bit/sec in, 100M bit/sec out
Map Size	800 x 600 pixels
Output Image Filename	output/nms-lab.jpg
Output HTML Filename	output/nms-lab.html
Background Image Filename	images/blueboard1024.png ∨

Cancel Submit

This is where help appears for maps

LibreNMS ♠ Overview ▤ Devices ⚙ Services ⬥ Ports ♥ Health ▤ Apps ⤭ Routing ❶ Alerts   ▲ admin ⚙ Global

- 🖵 Dashboard
- ▥ Maps
- ⚡ Plugins — Weathermap — 🔖 nms-lab.conf
- 🔧 Tools
- 🔒 Plugin Admin
- 🔖 Eventlog
- ☁ Inventory
- �ᴵ Outages
- 🔍 IPv4 Address
- 🔍 IPv6 Address
- 🔍 MAC Address
- 🔍 ARP Tables
- 🔍 FDB Tables

Availability Map

Summary	
Up	
Down	
Ignored tag	0
Alert disabled	NA
Disabled/Shutdown	0
Total	0

Device	Traffic
192.168.50.1	

http://Librenms-IP/plugins/Weathermap/output/nms-lab.html